



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/045,462	11/07/2001	John A. Ewen	31223-81316	2085

7590

09/24/2003

David J. Alexander
Fina Technology, Inc.
P. O. Box 674412
Houston, TX 77267-4412

EXAMINER

CHOI, LING SIU

ART UNIT

PAPER NUMBER

1713

DATE MAILED: 09/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
10/045,462Applicant(s)
EwenExaminer
Ling-Siu ChoiArt Unit
1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on May 19 and June 24, 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 37-78 is/are pending in the application.
- 4a) Of the above, claim(s) 67-78 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 38-55 and 62-66 is/are allowed.
- 6) ☒ Claim(s) 56-61 is/are rejected.
- 7) ☒ Claim(s) 37 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other: _____

Art Unit: 1713

DETAILED ACTION

1. This Office Action is in response to the Amendment filed May 19, 2003 and the Supplemental Amendment filed June 24, 2003. Claims 37-78 are now pending, wherein claims 67-78 were withdrawn from consideration. It is noted that claims 37-66 are drawn to a polymer product prepared in the presence of a catalyst system and claims 67-78 are drawn to the catalyst system. The case law held that "[T]he patentability of a product does not depend on its method of production. **If the product in the product-by-process claims is the same** as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made **by a different process.**" (Emphasis added) *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Accordingly, if the polymer is allowable, it is not necessarily for the catalyst system used to prepare the polymer to be allowable. On the other hand, if the catalyst system is allowable, the polymer made by such catalysis system may not be allowable because the same polymer may be made by a completely different catalyst system. As a result, Group II will not be rejoined with Group I if Group I is allowable and the restriction is made as final.
2. In view of the Amendment, rejection of claims 37-55 and 62-66 under 35 U.S.C. 103(a) as being unpatentable over Kaminsky et al. (US 4,769,510) in view of Ewen (US 4,522,982) is removed. Since claims 56-61 are rejected based on a new ground, this Office Action is made as a second non-final rejection.

Art Unit: 1713

Claim Objections

3. Claim 37 is objected to because of the following informalities: lines 6 and 10, “(C₅R'_m)” is suggested to be changed to --(C₅R'_m)--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. **The following is a quotation of the second paragraph of 35 U.S.C. 112:**

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 49 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Line 5, the recitation “(C₅R'_m) is an indenyl group” causes indefiniteness because it is not necessarily to represent an indenyl group if a specific R'_m is not fused with C₅.

Claim Rejections - 35 USC § 102

Art Unit: 1713

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

7. Claims 56-61 are rejected under 35 U.S.C. 102(e) as being anticipated by Kaminsky et al. (US 4,769,510).

The present invention relates to an isotactic polymer produced in the presence of a catalyst comprising a chiral, stereorigid metallocene in the form of $R''(C_5R'_m)_2MeQ_p$, wherein R'' is an alkylene radical having 1 to 4 carbon atom or a silicon hydrocarbyl radical acting as an interannular bridge between the two $(C_5R'_m)$ rings (summary of claim 56).

Kaminsky et al. disclose a (co)polymer of propylene, which have a **high degree of isotacticity**, the (co)polymer being obtained in the presence of a catalyst system composed of (a) a zirconium compound which is stereo-rigid and chiral and (b) a linear or cyclic aluminoxane (abstract), wherein the stereo-rigid, chiral zirconium compound is a π -linked, unsymmetrical,

Art Unit: 1713

mononuclear or polynuclear compound which contains linear or cyclic hydrocarbon chains as bridges (col. 1, lines 63-67; col, 2, lines 1-19). Thus the present claims are anticipated by the disclosure of Kaminsky et al..

Allowable Subject Matter

8. Claims 37-55 and 62-66 are allowable over the closest references: Kaminsky et al. (US 4,769,510). In view of Example 2 and Example 10, wherein Example 2 is corresponding to the disclosure of Kaminsky et al.(ethylene-bridge metallocene) and Example 10 (silicon-bridge metallocene) the present invention, the following results demonstrate the difference on the polymers obtained according to the present invention and the disclosure of Kaminsky et al.:

	Metallocene	T _m (°C-DSC)	Intrinsic Viscosity (dl/g)
Example 2	ethylene bis(indenyl) zirconium dichloride	135.2	0.23
Example 10	dimethylsilyl bis(indenyl) zirconium dichloride	142.3	0.46

Since intrinsic viscosity relates to molecular weight, a polymer having a higher intrinsic viscosity implies that the polymer has a higher molecular weight. Thus, the replacement of an ethylene - bridge with a silicon-bridge in the metallocene will lead to a polymer having higher molecular

Art Unit: 1713

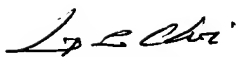
weight and melting point. As a result, the polymer prepared according to the present invention is different from the one obtained according to the disclosure of Kaminsky et al..

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is (703)305-0887.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reach on (703)308-2450.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703)308-2351.



Ling -Siu Choi, Ph.D.

September 19, 2003